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EXAMINER	
LAI, ANDREW	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,401	CLARK, ALAN D.	
	Examiner	Art Unit	
	ANDREW LAI	2473	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,22,23,30 and 31* is/are rejected.

7)☒ Claim(s) *17-21, 24-29 and 32-39* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-39 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 1, the only Independent claim, Claim 1 is drawn to "*a method*" While the claim recites a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of In Re Bilski 88 USPQ2d 1385. The instant claim 1 is neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. The claimed method including steps of, in short, *determining the level of impairments, grouping impairments into event groups, comparing event groups with problem signatures and categorizing event groups* is broad enough that the claim could be completely performed mentally, verbally or without a machine nor is any transformation apparent. For example, none of above claimed steps is cited as being tied with any particular machine or cited as being transforming any underlying subject matter.

Claims 2-39, none of which citing any particular machine or transformation of any subject matter, depend from claim 1 and thus are rejected on the same ground as said above.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-8, 10-12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Garg et al (US 6,327,677, patented Dec. 4, 2001, "Garg").

Garg discloses an invention wherein "a system is provided that monitors a network environment" (Abstract line 1) employing, see Fig. 1, "Network Monitor 22". Garg's invention comprises the following features:

Regarding claim 1, *a method for identifying problems in a network environment* ("network-related monitoring system that detects problems or potential problems in a network environment", col. 2 lines 39-41), *comprising the steps of:*

a. during more than one interval ("polling time intervals", col. 6 line 54, or "data is collected from the network at various intervals (e.g., every five minutes)", col. 10 lines 30-31) *determining the level of one or more impairments* (in view of above said "detects problems", see further "Network monitor 22 includes a data collection module 30 that collects information from various devices or applications", col. 5 lines 14-16, wherein "the data collected from the network can be selective ... with respect to polling time periods", col. 6 lines 51-54, and *determining level of* problems by "identify problems when the associated parameter exceeds peak line or falls below minimum line" col. 10 lines 27-29);

b. grouping said levels of one or more impairments (above said "detects problems" by the act that "collects information from devices or applications") *into one or more event groups* ("such as information regarding network utilization (or device utilization), lost packets, response time, or number of errors", col. 5 lines 16-18, which act further "reduces the collected data by reducing the granularity of the data over time and performing statistical reduction of the data", col. 5 lines 24-26);

c. comparing said one or more event groups (e.g., above said "network utilization" with "reduced granularity" for example, other *event groups* being, e.g., "lost packets, response time, or number of errors", etc., as cited above) *with a plurality of problem signatures* ("analyzes operation and performance by comparing the current data collected from the network ... with the cognitive signatures", col. 6 lines 58-62, or equivalently, "comparing current network operation and performance data to historical network operation and performance", col. 2 lines 41-43, wherein "the historical data is represented in multiple cognitive signatures", col. 2 lines 60-61, for which "Fig. 6A illustrates an exemplary cognitive signature 91 in a graphic manner", col. 9 lines 64-65, using "network utilization" as an example);

d. categorizing at least one of said one or more event groups (e.g., again, "network utilization") *as being associated with a network problem having one of said plurality of problem signatures* (refer to Fig. 6A again and see "cognitive signature 91 is used to identify problems when the associated parameter exceeds peak line 91b or falls below minimum line 91c", col. 10 lines 26-29, noting again that Fig. 6A is merely using

"network utilization" as an exemplary "cognitive signature" and other types of "signatures", such as those cited above, can be used in the same fashion).

Regarding claim 2, *a method as defined in claim 1, further comprising*

a. determining the source of more than one call ("identifies information about the source and cause of the problem", col. 7 lines 15-16, which, as shown in Fig. 6A using "network utilization" as an example, involves *more than one call* because it's done over a certain "Time" period);

b. grouping said more than one calls into one or more call groups based on the source of said more than one calls (naturally so because "it is important to identify the network problem and the source of the problem", col. 1 lines 48-49, which requires *grouping calls based on source of calls*, otherwise it's impossible to determine "network problem" as well as "source of the problem" at the same time);

c. for each call group (above said problem with a particular "source of the problem") *determining the number of calls having said network problem* (above said "identifies" "may also include the number of occurrences of the problem", col. 7 lines 17-18); *and*

d. estimating the location of said network problem (again above cited "identify the source of the problem") *based on the number of calls having said network problem* (refer to Fig. 6A again and see "cognitive signature 91 is used to identify problems when the associated parameter exceeds peak line 91b or falls below minimum line 91c", col. 10 lines 26-29, which will have to rely on above cited identifying the "number of occurrences of the problem").

Regarding claim 4, *a method as defined in Claim 2, wherein said estimating step further comprising:*

a. determining the percentage of calls within said call group having said network problem (Fig. 6A shows comparison of "Network Utilization" in terms "%");

b. estimating that the location of said network problem is at the location associated with said call group (see discussion for claim 2 regarding step *d.* thereof) *if the percentage of calls is high* (again "cognitive signature 91 is used to identify problems when the associated parameter exceeds peak line 91b" said above, noting again Fig. 6A shows comparison in terms of "%").

Regarding claim 5, *a method as defined in Claim 1, wherein said one or more impairments is selected from the group consisting of delay, packet loss* ("collects information regarding network utilization (or device utilization), lost packets, ...", col. 5 lines 15-17), *jitter, distortion, absolute packet delay variation, relative packet to packet delay variation, short term delay variation, short term average delay, timing drift, and proportion of out-of-sequence packets.*

Regarding claim 6, *a method as defined in Claim 1, wherein said network problem is selected from the group consisting of local area network congestion* ("network utilization" cited above, which reflect *network congestion* because "as network utilization increases, polling may decrease to avoid further congestion of the network", col. 13 lines 25-27), *access link congestion, route change, access link failure, route flapping, and route diversity.*

Regarding claim 7, *a method as defined in Claim 5, wherein said network problem is selected from the group consisting of local area network congestion* ("network utilization" cited above, which reflect *network congestion* because "as network utilization increases, polling may decrease to avoid further congestion of the network", col. 13 lines 25-27), *access link congestion, route change, access link failure, route flapping, and route diversity.*

Regarding claim 8, *a method as defined in claim 7, further comprising*

a. determining the source of more than one call ("identifies information about the source and cause of the problem", col. 7 lines 15-16, which, as shown in Fig. 6A using "network utilization" as an example, involves *more than one call* because it's done over a certain "Time" period);

b. grouping said more than one calls into one or more call groups based on the source of said more than one calls (naturally so because "it is important to identify the network problem and the source of the problem", col. 1 lines 48-49, which requires *grouping calls based on source of calls*, otherwise it's impossible to determine "network problem" as well as "source of the problem" at the same time);

c. for each call group (above said problem with a particular "source of the problem") *determining the number of calls having said network problem* (above said "identifies" "may also include the number of occurrences of the problem", col. 7 lines 17-18); *and*

d. estimating the location of said network problem (again above cited "identify the source of the problem") *based on the number of calls having said network problem*

(refer to Fig. 6A again and see "cognitive signature 91 is used to identify problems when the associated parameter exceeds peak line 91b or falls below minimum line 91c", col. 10 lines 26-29, which will have to rely on above cited identifying the "number of occurrences of the problem").

Regarding claim 10, *a method as defined in Claim 8, wherein said estimating step further comprising:*

a. determining the percentage of calls within said call group having said network problem (Fig. 6A shows comparison of "Network Utilization" in terms "%");

b. estimating that the location of said network problem is at the location associated with said call group (see discussion for claim 2 regarding step *d.* thereof) *if the percentage of calls is high* (again "cognitive signature 91 is used to identify problems when the associated parameter exceeds peak line 91b" said above, noting again Fig. 6A shows comparison in terms of "%").

Regarding claim 11, *a method of Claim 7, further comprising the step of producing an array* ("the granularity of the data over time", col. 5 lines 24-25) *of said levels of one or more impairments* (e.g. "network utilization" cited above) *from measurements taken at one location within the network* ("data collection module 30 can collect data from any number of networks and any number of network devices or applications", col. 5 lines 20-22, noting that therein a particular "network device" determines *one location within the network*).

Regarding claim 12, *a method as defined in claim 11, further comprising*

a. determining the source of more than one call ("identifies information about the source and cause of the problem", col. 7 lines 15-16, which, as shown in Fig. 6A using "network utilization" as an example, involves *more than one call* because it's done over a certain "Time" period);

b. grouping said more than one calls into one or more call groups based on the source of said more than one calls (naturally so because "it is important to identify the network problem and the source of the problem", col. 1 lines 48-49, which requires *grouping calls based on source of calls*, otherwise it's impossible to determine "network problem" as well as "source of the problem" at the same time);

c. for each call group (above said problem with a particular "source of the problem") *determining the number of calls having said network problem* (above said "identifies" "may also include the number of occurrences of the problem", col. 7 lines 17-18); *and*

d. estimating the location of said network problem (again above cited "identify the source of the problem") *based on the number of calls having said network problem* (refer to Fig. 6A again and see "cognitive signature 91 is used to identify problems when the associated parameter exceeds peak line 91b or falls below minimum line 91c", col. 10 lines 26-29, which will have to rely on above cited identifying the "number of occurrences of the problem").

Regarding claim 14, *a method as defined in Claim 12, wherein said estimating step further comprising:*

a. determining the percentage of calls within said call group having said network problem (Fig. 6A shows comparison of "Network Utilization" in terms "%");

b. estimating that the location of said network problem is at the location associated with said call group (see discussion for claim 2 regarding step *d.* thereof) *if the percentage of calls is high* (again "cognitive signature 91 is used to identify problems when the associated parameter exceeds peak line 91b" said above, noting again Fig. 6A shows comparison in terms of "%").

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 3, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Oliver et al (US 2003/0225876, published Dec. 4, 2003, "Oliver").

Garg discloses claimed limitations in section 3 above as applied to claims 1 and 2. Further:

Regarding claim 3, Garg discloses *a method as defined in Claim 2, wherein determining the source of more than one call* (see discussion for claim 2 above) *includes determining the source protocol address* (refer to Fig. 1 and see "networks 10 and 12 may use any communication protocol", col. 4 lines 37-38, wherein "identifies information about the source and cause of the problem", col. 7 lines 15-16, is

performed, which has to rely on a *source protocol address* as well known in the art) *of said more than one call* (see discussion above for claim 2 regarding "the number of occurrences of the problem"). Garg however does not expressly disclose that said "any communication protocol" comprises *internet* protocol. However, using *internet* protocol has been well known in the art at the time of the present invention, as shown in Oliver. Oliver discloses an invention wherein "networks have been monitored for fault conditions" [0003] lines 1-2) comprising network using *internet* protocol ("the network services may include ... IP based network services", [0037] lines 3-4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Garg's networks that "may use any communication protocol" by adding Oliver's expressly taught IP protocol in order to provide a more efficient and dynamic fault detection mechanism to achieve "a scalable method of continuously and unobstrusively monitoring network elements ... for real-time monitoring" (Oliver, [0005] last four lines).

Regarding claim 9, Garg discloses *a method as defined in Claim 8, wherein determining the source of more than one call* (see discussion for claim 2 above) *includes determining the source protocol address* (refer to Fig. 1 and see "networks 10 and 12 may use any communication protocol", col. 4 lines 37-38, wherein "identifies information about the source and cause of the problem", col. 7 lines 15-16, is performed, which has to rely on a *source protocol address* as well known in the art) *of said more than one call* (see discussion above for claim 2 regarding "the number of occurrences of the problem"). Garg however does not expressly disclose that said "any communication protocol" comprises *internet* protocol. However, using *internet* protocol

has been well known in the art at the time of the present invention, as shown in Oliver. Oliver discloses an invention wherein "networks have been monitored for fault conditions" [0003] lines 1-2) comprising network using *internet* protocol ("the network services may include ... IP based network services", [0037] lines 3-4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Garg's networks that "may use any communication protocol" by adding Oliver's expressly taught IP protocol in order to provide a more efficient and dynamic fault detection mechanism to achieve "a scalable method of continuously and unobstrusively monitoring network elements ... for real-time monitoring" (Oliver, [0005] last four lines).

Regarding claim 13, Garg discloses *a method as defined in Claim 12, wherein determining the source of more than one call* (see discussion for claim 2 above) *includes determining the source protocol address* (refer to Fig. 1 and see "networks 10 and 12 may use any communication protocol", col. 4 lines 37-38, wherein "identifies information about the source and cause of the problem", col. 7 lines 15-16, is performed, which has to rely on a *source protocol address* as well known in the art) *of said more than one call* (see discussion above for claim 2 regarding "the number of occurrences of the problem"). Garg however does not expressly disclose that said "any communication protocol" comprises *internet* protocol. However, using *internet* protocol has been well known in the art at the time of the present invention, as shown in Oliver. Oliver discloses an invention wherein "networks have been monitored for fault conditions" [0003] lines 1-2) comprising network using *internet* protocol ("the network services may include ... IP based network services", [0037] lines 3-4). It would have

been obvious to one of ordinary skill in the art at the time of the invention to modify Garg's networks that "may use any communication protocol" by adding Oliver's expressly taught IP protocol in order to provide a more efficient and dynamic fault detection mechanism to achieve "a scalable method of continuously and unobstrusively monitoring network elements ... for real-time monitoring" (Oliver, [0005] last four lines).

6. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Klausmeier et al (US 5,666,353, patented Sep. 9, 1997, "Klausmeier") and further in view of Takahara et al (US 5,477,542, patented Dec. 19, 1995, "Takahara").

Regarding claim 15, Garg discloses claimed limitations in section 3 above as applied to claim 7, including *a method as defined in Claim 7, wherein determining the level of one or more impairments includes* steps of processing, e.g., "network utilization" (see discussion for claim 7 above). Garg also disclosed monitoring for example "lost packet" (col. 5 line 17) as one example of *impairment*, which inherently requires monitoring when a packet has arrived or a packet has never arrived.

It is noted that Garg does not disclose the following steps regarding claim 15: *a. applying a local timestamp to a packet corresponding to the actual arrival time of said packet; b. extracting a sending timestamp from said packet; c. extracting a sending sequence number from said packet; d. estimating an expected arrival tiem for said packet; and e. subtracting the actual arrival time of said packet from the expected arrival time of said packet.*

However all of these steps said above have been well known in the art at the time of the present invention. Below is just one example.

Klausmeier discloses "frame based traffic policing for a digital switch" (Title) as an improvement over "prior art" (Fig. 8) of "virtual scheduling algorithm for performing traffic control" (col. 5 lines 30-31), comprising:

a. a. applying a local timestamp to a packet corresponding to the actual arrival time of said packet ("actual arrival time of a cell", col. 5 line 35, and see Fig. 8 step 810 "Arrival of a cell k at time $t_a(k)$");

c. extracting a sending sequence number (the number "k" cited above) *for said packet* ("cell k" cited above);

d. estimating an expected arrival time for said packet ("a Theoretical Arrival Time value (TAT) that defines a 'nominal' arrival time of a data cell", col. 5 lines 32-33);

e. subtracting the actual arrival time of said packet ("$t_a(k)$" above) *from the expected arrival time of said packet* ("TAT" above, and refer to Fig. 8 and see step 830 testing if "TAT < $t_a(k)$" and the subsequent steps depending on the outcome of step 830 wherein the testing if "TAT < $t_a(k)$" is simply a mathematical expression equivalent to testing if "TAT - $t_a(k)$ < 0" or if the result of *subtracting the actual time from the expected time* is less than zero).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Garg's lost packet monitoring by adding the details of Klausneier in order to provide more efficient system in which "the throughput of the

digital network is maximized during periods of network congestion" (Klausmeier: col. 2 lines 6-7).

It is further noted that Garg in view of Klausmeier does not expressly disclose *b. extracting a sending timestamp from said packet.* However, said step has again been well known in the art at the time of the present invention. Here is one example.

Takahara discloses "method and apparatus for controlling multimedia information communication" (Title), comprising:

b. extracting a sending timestamp from said packet (refer to Fig. 3, especially "video receive control 202" which is "for calculating an average of the packet transmission intervals from packet transmission time extracted from video packets", col. 4 line 66 – col. 5 line 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Garg by adding Takahara's method of monitoring transmission intervals in order to provide a more dynamically efficient system wherein "when traffic load of a communication network becomes so high that end-to-end transmission delay becomes too large to perform both video and voice communication, the information transmission mode is automatically changed while high quality communication is maintained at least with respect to voice data" (Takahara: col. 2 lines 15-20).

Regarding claim 16, the combination of Garg, Klausmeier and Kakahara discloses *a method as defined in Claim 15, wherein determining the level of one or more impairments further includes computing an average of said subtracted value over*

a short period of time (Takahara: Fig. 2 "video receiving control 202" comprising "a function for calculating an average of the packet arrival intervals", col. 4 lines 64-65).

7. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Hedayat et al (US 2002/0039371, published Apr. 4, 2002, "Hedayat").

Regarding claim 22, Garg discloses claimed limitations in section 3 above as applied to claim 7, including *a method as defined in Claim 7, wherein determining the level of one or more impairments includes* steps of determining for example "network utilization" as well as "lost packet" (see discussion above for claim 7).

Garg does not disclose *a. determining the delay of a first packet; b. determining the delay of a subsequent packet; and c. subtracting the delay of said subsequent packet from the delay of said first packet*

However, the missing steps in Garg have been well known in the art at the time of the present invention. Below is just on example.

Hedayat discloses "IP packet identification method and system for TCP connection and UDP stream" (Title), comprising:

a. determining the delay of a first packet ("the method also includes calculating, for each packet, a propagation delay from the first location to the second location", [0017] lines 13-15)*;*

b. determining the delay of a subsequent packet (("the method also includes calculating, for each packet, a propagation delay from the first location to the second location", [0017] lines 13-15)*; and*

c. subtracting the delay of said subsequent packet from the delay of said first packet ("the method includes calculating, for each pair of consecutive packets received at the second location, a delay variation as the difference between the propagation delays calculated for the pair of consecutive packets", [0017] lines 17-20).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Garg by adding the method of Hedayat for calculating delay variation for the pair of consecutive packets in order to provide a better mechanism that "can provide network operators valuable information about the performance of their networks, and assist them in troubleshooting network issues" (Hedayat: [0012] last three lines).

Regarding claim 23, the combination of Garg and Hedayat discloses *a method as defined in Claim 22, wherein determining the level of one or more impairments further includes computing an average of said subtracted value over a short period of time* (Hedayat: "the method also includes calculating a jitter value as an average delay variation, averaged over a predetermined number of pairs of consecutive packets", [0017] last four lines).

8. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Botton-Dascal et al (US 6,990,616, patented Jan. 24, 2006, "Botton-Dascal").

Garg discloses claimed limitation in section 3 above as applied to claim 7 and further:

Regarding claim 30, Garg discloses *a method as defined in Claim 7, wherein determining the level of one or more impairments* (see discussion above for claim 7)

includes calculating the number of packets lost ("Network monitor 22 includes a data collection module 30 that collects information from various devices or applications, such as information regarding ... lost packets", col. 5 lines 13-16).

Garg does not expressly disclose calculating "lost packets" *as a percentage of the sum of packets lost plus packets received.*

However, such *packets lost* as *a percentage of* all packets has been well known in the art at the time of the present invention. Below is just one example.

Botton-Dascal discloses "a method for testing of communication networks, using a plurality of traffic agents" (Abstract lines 1-2), comprising:

packet lost *as a percentage of the sum of packets lost plus packets received* (see Fig. 2, steps of "detect loss of packet", "computer total loss packets" and see "computes an overall lost ratio, p, equal to the number of lost packets divided by the total number of packets sent, N", col. 10 lines 48-50).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Garg by adding the percentage calculation of Botton-Dascal for lost packets in order to provide an improved network monitoring system that overcome deficiency of conventional technique that "cannot readily distinguish between problems whose root causes are in the application and those that are in the network itself" (Botton-Dascal: col. 2 lines 10-12).

9. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garg in view of Variri et al (US 2002/0089975, published Jul. 11, 2002).

Garg discloses claimed limitations in section 3 above as applied to claim 7. Futher:

Regarding claim 31, Garg discloses *a method as defined in Claim 7, where determining the level of our or more impairments including determining* "network utilization" (see discussion above for claim 7).

Garg does not disclose such determining comprising *the number of packets received out of sequence as a percentage of total number of packets received.*

However, such counting *the number of packets received out of sequence as a percentage of total number of packets received* has been well known in the art at the time of the present invention. Below is just one example.

Vaziri discloses "internet switch box, system and method for internet telephony" (Title) comprising *determining the number of packets received out of sequence as a percentage of total number of packets received* ("the statistical record can include such information as the percentage of lost packets ... the percentage of packets out of sequence", [0156] lines 11-14).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Garg by adding Vaziri's method of out-of-sequence packet counting in order to provide more economical system that "allows low-cost, easy-to-use, embedded Internet access for telephones. Lower cost is achieved because no PC's are required" (Vaziri: [0021] lines 3-5).

Allowable Subject Matter

10. Claims 17-21, 24-29 and 32-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 17 contains features conventional techniques in the art failed to anticipate or render obvious.

Claim 18 also contains features conventional techniques in the art failed to anticipate or render obvious. Claims 19-21 depend from claim 18.

Claim 24 contains the same features as those of Claim 17.

Claim 25 contains the same features as those of Claim 18. Claims 26-29 depend from claim 25.

Claim 32 contains the same features as those of Claim 17. Claims 33-35 depend from claim 32.

Claim 36 contains features conventional techniques in the art failed to anticipate or render obvious. Claims 37-39 depend from claim 36.

Response to Arguments

11. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW LAI whose telephone number is (571)272-

9741. The examiner can normally be reached on M-F 7:30-5:00 EST, Off alternative Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on 571-272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Andrew Lai/
Examiner, Art Unit 2473